

Comparisons of Job Characteristics

Focus Occupation: **Boilermakers (47-2011)**

Associated Occupation: **Plumbers, Pipefitters, and Steamfitters (47-2152)**

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 95

Focus Occupation: Boilermakers (47-2011)

Associated Occupation: Plumbers, Pipefitters, and Steamfitters (47-2152)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Mechanical	6.8	17.0	17.5	0	Current knowledge level may be sufficient
Building and Construction	4.0	16.6	13.8	<	Expanded education and/or training may be required
Design	5.2	11.2	11.9	0	Current knowledge level may be sufficient
Mathematics	9.2	11.0	10.8	0	Current knowledge level may be sufficient
Physics	4.3	9.6	7.6	<	Expanded education and/or training may be required
Engineering and Technology	5.7	9.1	12.6	>>	Current knowledge level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 76

Focus Occupation: Boilermakers (47-2011)

Associated Occupation: Plumbers, Pipefitters, and Steamfitters (47-2152)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Operation and Control	5.4	8.7	11.4	>>	Skill level is likely more than sufficient
Quality Control Analysis	5.9	8.7	10.6	>	Skill level is likely sufficient
Repairing	3.4	8.4	9.2	0	Current skill level may be sufficient
Troubleshooting	4.5	8.4	9.6	>	Skill level is likely sufficient
Equipment Maintenance	3.5	7.5	9.3	>	Skill level is likely sufficient
Equipment Selection	3.3	6.0	8.0	>>	Skill level is likely more than sufficient
Installation	1.7	5.5	3.3	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 93			
Focus Occupation: Boilermakers (47-2011) Associated Occupation: Plumbers, Pipefitters, and Steamfitters (47-2152)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Arm-Hand Steadiness	6.8	11.8	11.8	0	Current ability level may be sufficient
Extent Flexibility	4.8	11.5	8.7	<<	Extensive improvement in abilities may be required
Visualization	7.5	11.2	10.2	0	Current ability level may be sufficient
Finger Dexterity	7.6	11.1	10.3	0	Current ability level may be sufficient
Multilimb Coordination	6.0	11.1	10.3	0	Current ability level may be sufficient
Gross Body Equilibrium	3.2	8.0	6.6	<	Some improvement in abilities may be required
Gross Body Coordination	3.9	7.4	6.2	<	Some improvement in abilities may be required
Speed of Limb Movement	3.2	6.3	4.8	<	Some improvement in abilities may be required
Spatial Orientation	2.7	5.8	3.8	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 91
Focus Occupation: Boilermakers (47-2011) Associated Occupation: Plumbers, Pipefitters, and Steamfitters (47-2152)		
Work Activities	Exclusivity of Activity	
Adhere to safety procedures	12	
Assemble and install pipe sections, fittings, or plumbing fixtures	71	
Build or repair structures in construction, repair, or manufacturing setting	54	
Cut, bend, or thread pipe for gas, air, hydraulic, or water lines	84	
Determine installation, service, or repair needed	58	
Determine project methods and procedures	76	
Fabricate, assemble, or disassemble manufactured products by hand	11	
Identify base metals for welding	68	
Install or replace meters, regulators, or related measuring or control devices	66	
Measure and mark reference points or cutting lines on workpieces	66	
Move or fit heavy objects	8	
Pressure test piping system or equipment for leaks	89	

Read blueprints	10
Read specifications	23
Read technical drawings	7
Repair or replace gas, steam, sewer, or water piping or fixtures	82
Repair or replace malfunctioning or worn mechanical components	62
Use acetylene welding/cutting torch	54
Use arc welding equipment	62
Use basic plumbing techniques	72
Use combination welding procedures	68
Use hand or power tools	2
Use pipe fitting equipment	80
Use pressure gauges	76
Verify levelness or verticality, using level or plumb bob	72
Weld together metal parts, components, or structures	54

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 84

Focus Occupation: Boilermakers (47-2011)

Associated Occupation: Plumbers, Pipefitters, and Steamfitters (47-2152)

Tools and Technologies	Exclusivity
Aerial lifts	13
Business function specific software	1
Compressors	9
Computers	1
Content authoring and editing software	1
Cutting and crimping and punching tools	3
Cutting tools	18
Dispensing tools	6
Face and head protection	7
Fall protection	16
Forming tools	2
Gas analyzers and monitors	10
Holding and clamping tools	3
Indicating and recording instruments	2
Industry specific software	1
Ladders and scaffolding	6
Length and thickness and distance measuring instruments	2
Lifting equipment and accessories	3
Machine tools	7
Marking tools	11
Measuring and layout tools	3
Metal bending and forming machinery	17

Non destructive examination equipment	13
Personal communication devices	2
Pneumatic tools	8
Power tools	2
Pressure measuring and control instruments	10
Prying and bending tools	10
Rough and finishing tools	5
Sampling equipment	12
Soldering and brazing and welding machinery and supplies	6
Special tooling fixtures	16
Wrenches and drivers	2

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.